

Candidate Name	Class	Register Number
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CHANGKAT CHANGI SECONDARY SCHOOL

REVISION QUESTIONS 2011

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.

Write your name, class and register number in the spaces at the top of this page.

MULTIPLE CHOICE QUESTIONS [40 MARKS]

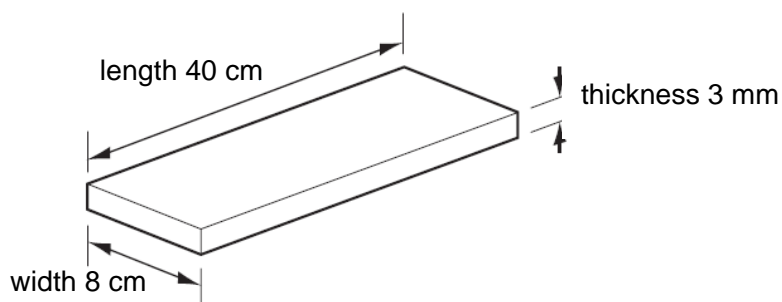
Answer all questions. Shade the correct answer in pencil on the OTAS sheet provided.

For Examiners' Use	Marks
Paper 1	/ 25
Expected Grade	Actual Grade
Parent's / Guardian's signature	

SECTION A: MULTIPLE CHOICE QUESTIONS

Answer all questions. Shade the correct answer in pencil on the OTAS sheet provided.

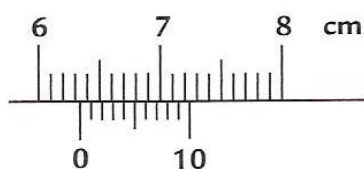
- 1 Which list contains only scalar quantities?
- A acceleration, displacement, velocity
- B distance, force, speed
- C force, length, time
- D length, mass, speed
- 2 A manufacturer needs to measure accurately the dimensions of a wooden floor tile. The approximate dimensions of the tile are shown.



Which instruments measure each of these dimensions accurately?

	length	thickness	width
A	metre rule	micrometer	vernier calipers
B	metre rule	vernier calipers	micrometer
C	micrometer	metre rule	vernier calipers
D	vernier calipers	micrometer	metre rule

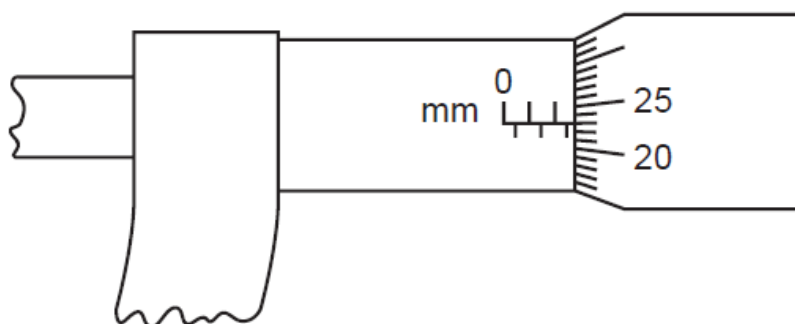
- 3 The diagram below shows part of a vernier caliper used to measure the diameter of a soft drink can. What is the reading shown?



- A 6.34 cm
- B 6.37 cm
- C 6.44 cm
- D 6.47 cm

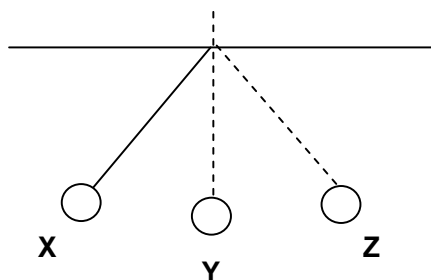
[Turn Over

- 4 The diagram shows part of a micrometer screw gauge. What is the reading shown?



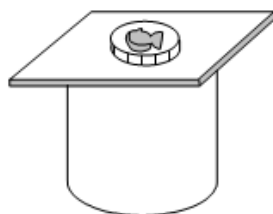
- A 2.23 mm C 3.23 mm
B 2.73 mm D 5.23 mm

- 5 The bob of a simple pendulum is swinging between **X** and **Z**. It takes 1.4 s to swing from X to Y. What is the period of the pendulum?



- A 2.6 s C 5.6 s
B 4.2 s D 7.0 s

- 6 A coin is placed on a card on top of a beaker, as shown. If the card is pulled away quickly, the coin does not move sideways but falls into the beaker.



Which property of the coin makes this possible?

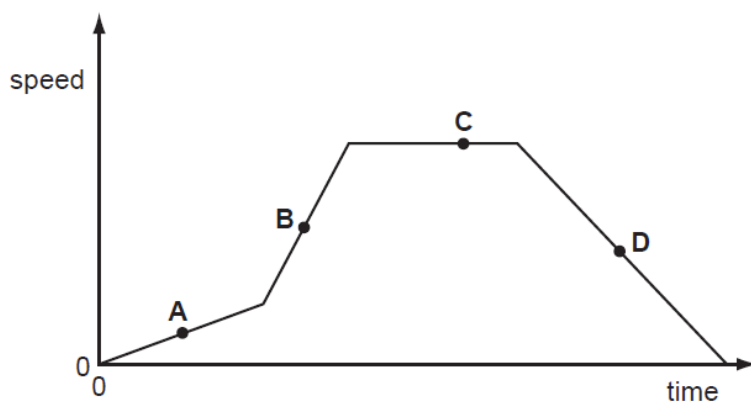
- A density C volume
B inertia D friction

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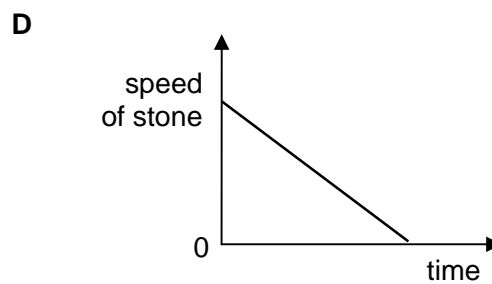
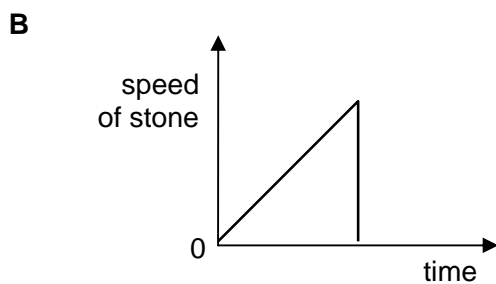
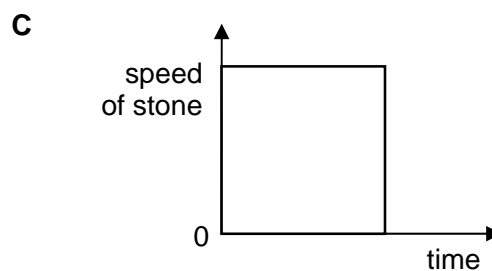
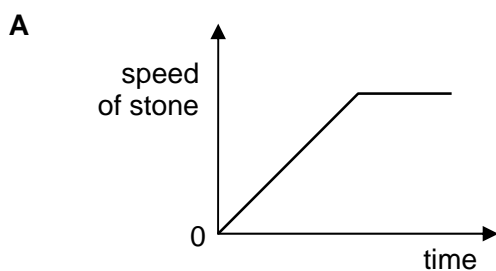
- 7 The table shows the weights of some masses on the surface of four different planets. Which planet has the greatest gravitational field strength?

	mass	weight
A	0.5 kg	20 N
B	2.0 kg	20 N
C	0.5 kg	40 N
D	2.0 kg	40 N

- 8 The speed-time graph shows the journey of a train. At which point does the acceleration have its highest value?



- 9 A small stone is dropped from the top of a ladder, falls and hits the ground. It does not rebound. Which speed-time graph is correct?



[Turn Over

- 10** Forces of 30 N and 50 N act on the same body, but in different directions. Which value could not be the resultant force on the body?

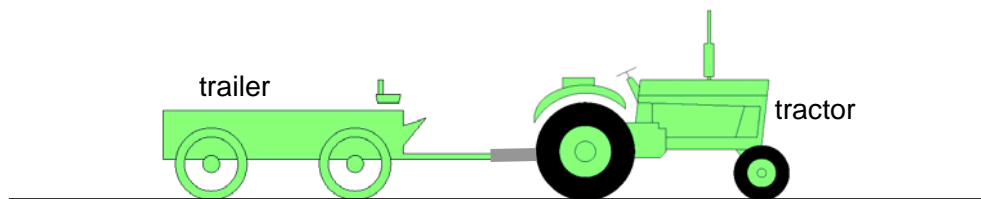
A 10 N

C 50 N

B 30 N

D 70 N

	balanced forces	unbalanced forces
A	velocity changes	velocity changes
B	velocity changes	velocity constant
C	velocity constant	velocity changes
D	velocity constant	velocity constant



What is the force exerted by the trailer on the tractor?

A **0 N**

C 1600 N forwards

B 1600 N backwards

D 3200 N forwards



What is the acceleration of the block?

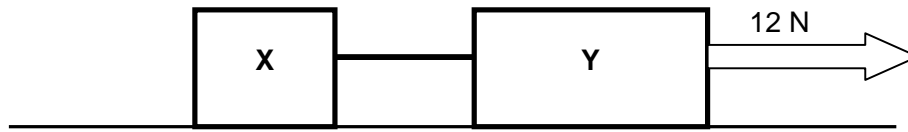
A 0.67 m/s^2

C 61.5 m/s^2

B 1.0 m/s^2

D 2.0 m/s^2

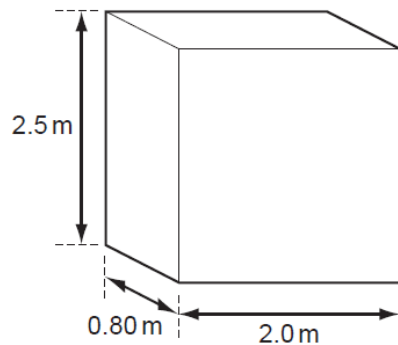
- 14 Two blocks, **X** and **Y**, of masses 1 kg and 2 kg respectively are joined by a steel rod and rest on a smooth horizontal surface as shown below. A constant force of 12 N is applied to block **Y** and the two blocks move together to the right.



Determine the acceleration of the blocks **X** and **Y**.

- A** 4 m/s^2
- B** 6 m/s^2
- C** 9 m/s^2
- D** 12 m/s^2

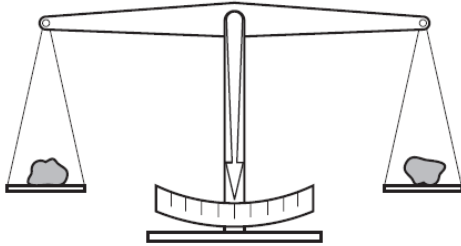
- 15** The base for a statue rests on level ground. It is made from stone and is 2.0 m long, 2.5 m high and 0.80 m wide. It has a weight of 96 000 N.



What is the pressure that the base exerts on the ground?

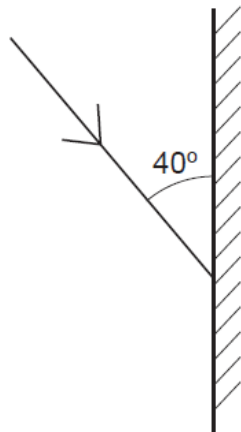
- | | | | |
|----------|----------|----------|----------|
| A | 19000 Pa | C | 48000 Pa |
| B | 24000 Pa | D | 60000 Pa |

- 16 The diagram shows two objects on a beam balance in equilibrium.



Which of the following statements is incorrect?

- A Both objects have the same mass.
 - B The moments about the pivot for both objects are equal in magnitude.
 - C Both objects have the same volume.
 - D Both objects have the same weight.
- 17 The diagram shows a single ray of light being directed at a plane mirror.

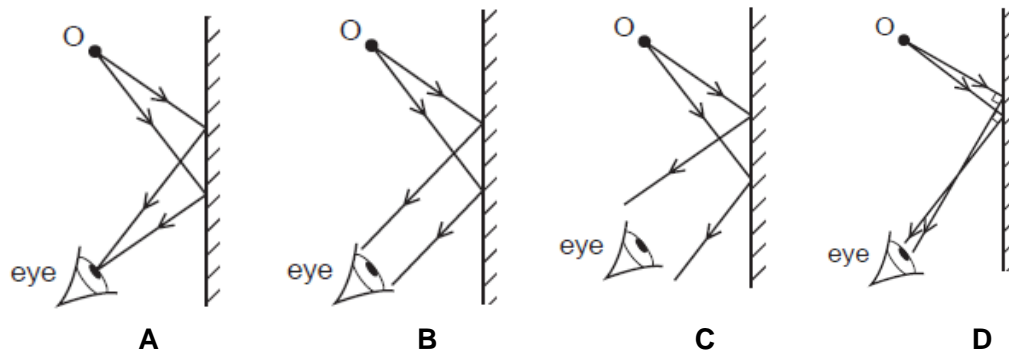


What are the angles of incidence and reflection?

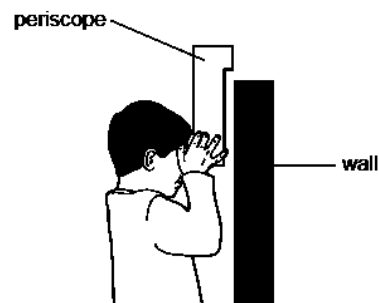
	angle of incidence	angle of reflection
A	40°	40°
B	40°	50°
C	50°	40°
D	50°	50°

- 18 An eye views an object **O** by reflection in a plane mirror.

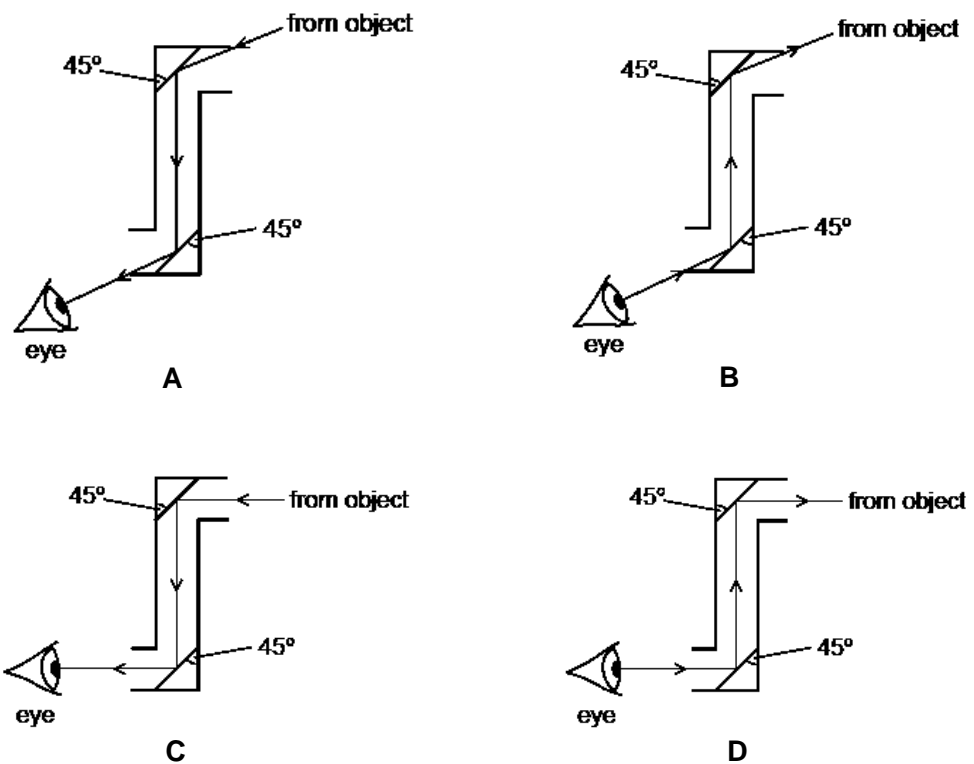
Which is the correct ray diagram?

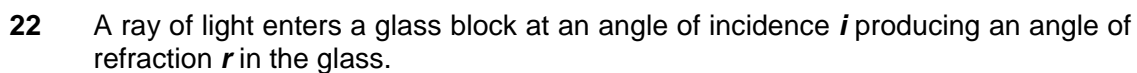
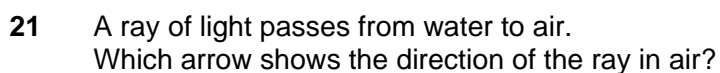


- 19 The diagram shows a child using a periscope to look at an object on the other side of a wall.



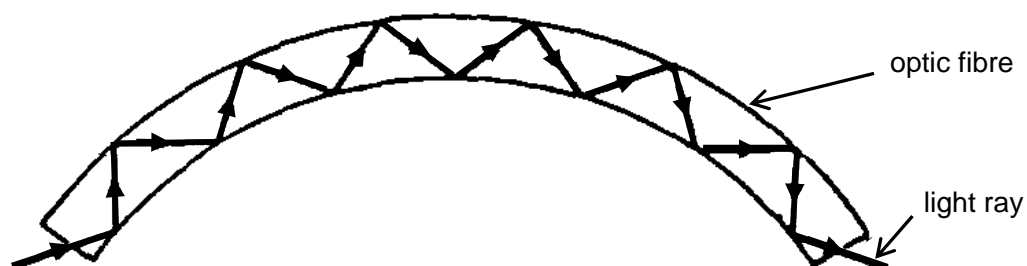
Which diagram shows a correctly drawn ray of light from the object?





- A** i / r
- B** $\sin(i / r)$
- C** $(\sin i) / (\sin r)$
- D** $(\sin i) \times (\sin r)$

- 23 The diagram below shows a ray of light passing along an optic fibre.

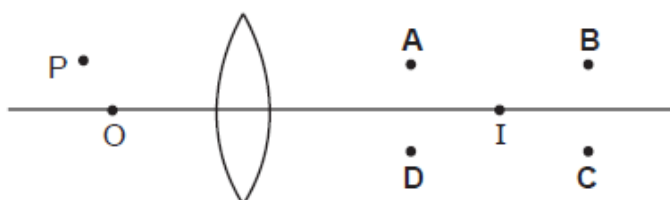


The ray of light passes along the fibre by _____.

- A** total internal transmission
B total internal dispersion
C total internal reflection
D total internal refraction
- 24 Which of the following correctly describes the image formed by a thin converging lens when used as a magnifying glass?

A	real	upright	magnified
B	real	inverted	magnified
C	virtual	upright	magnified
D	virtual	inverted	magnified

- 25 When a point object is placed at position **O**, its image is formed at position **I**.



When the point object is placed at position **P**, where is its image formed?

MCQ ANS

1	2	3	4	5	6	7	8	9	10
D	A	A	B	C	B	C	B	B	A
11	12	13	14	15	16	17	18	19	20
C	B	B	A	D	C	D	C	C	C
21	22	23	24	25					
A	D	C	C	C					